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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,944

07/16/2003

Edward Hugh Welbon

5681-66200

8592

35690

7590

10/06/2004

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.

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EXAMINER

PATEL, PARESH H

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,944

Applicant(s)

WELBON ET AL.

Examiner

Paresh Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Drawings***

The drawings are objected to under 37 CFR 1.83(a) because they fail to show test board (paragraph 0011), variety of contacts (paragraph 0011), plurality of contact pins (paragraph 0011), thumb-screws (paragraph 0014) and footprint pattern of DUT (paragraph 0015) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: at paragraph 0011, "interposer 60" should read --interposer 160--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8-11 and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Driller et al. (US 5109596).

Regarding claims 1, 8 and 15, Driller et al. (hereafter Driller) in fig. 3 discloses a test system comprising:

a system board (first circuit board for claim 1) [24] including a footprint pattern [14] of contacts for connection to a device under test;

a test board (second circuit board for claim 1) [25] for conveying signals output from said device under test to an analyzer [2], wherein said test board includes a corresponding footprint pattern [15] of contacts; and

an apparatus [8] positioned between said system board and said test board for conveying said signals output from said device under test from said system board to said test board;

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wherein said apparatus includes;

a dielectric substrate [8] having a first side forming a first surface and a second side forming a second surface; and

a plurality of contact pins [12-13] each configured to convey a respective one of said signals between said first side and said second side;

wherein each of said plurality of contact pins extends through [see fig. 3] said dielectric substrate and protrudes beyond said first surface and said second surface; and

wherein one or more of said plurality of contact pins is formed using a pliable resistive material [12 and 13].

Regarding claims 2 and 9, Driller in fig. 3 discloses said pliable resistive material has sufficient conductivity to convey said signals between said first side and said second side.

Regarding claims 3, 10 and 16, Driller in fig. 3 discloses said plurality of contact pins are arranged in a pattern that matches said footprint pattern of contacts on said system board and said test board.

Regarding claims 4, 11 and 17, Driller in fig. 3 discloses at least a portion of said plurality of contact pins is configured to mate to a respective contact on said system board and said test board.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7, 12-14 and 18-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Driller et.al. (US 5109956).

Regarding claims 5, 12 and 18, Driller in fig. 2-3 discloses each of said plurality of contact pins is configured to form an electrical connection to a respective contact on each of said system board and said test board in response to said system board being positioned adjacent to said first side of said dielectric substrate and said test board being positioned adjacent to said second side of said dielectric substrate and having a compressive force [using 10] exerted on said system board and said test board causing said pliable resistive material to deform.

Here, Driller is silent about deformation of pliable resistive material. However, conductive elastomer 14 and 15 can be mounted on contacts 12 and 13 as seen in the fig. 1, which can deform. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify apparatus of fig. 2 to add conductive elastomer 14 and 15 of fig. 1, in order to insure necessary pressure between device under test and other boards during testing.

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Regarding claims 6, 13 and 19, Driller at lines 26-34 of column 5 discloses said pliable resistive material includes a carbon based polymer [carbon-enriched polyurethanes].

Regarding claims 7, 14 and 20, Driller is silent about said pliable resistive material has a resistance value greater than five ohms. However, it would have been obvious one having ordinary skill in the art at the time the invention of made to use pliable resistive material has a resistance value greater than five ohms, since it was known in the art that it will help reduce noise in the circuit and also to obtain desire conductivity in the circuit (see element 54 of US Pub. 20020108778 and PTF ink of US 6108212).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paresh Patel whose telephone number is 571-272-1968. The examiner can normally be reached on 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paresh Patel
September 30, 2004

A handwritten signature in black ink, appearing to read 'Paresh', written over the printed name.